REMARKS/ARGUMENTS

Claims 1-39 are pending in the present application.

This Amendment is in response to the final Office Action mailed August 16, 2004. In the final Office Action, the Examiner rejected claims 13-15, 28-30, 35, and 37-39 under 35 U.S.C. §112; claims 1-39 under 35 U.S.C. §103(a). Applicant amended claims 24, 25, 35, and 36. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Rejection Under 35 U.S.C. § 112

1. Trademark in claims

In the Final Office Action, the Examiner rejected claims 13-15, 28-30, 35, and 37-39 under 35 U.S.C. §1112. The Examiner states that the trademark JAVA identifies the source, i.e., Sun Microsystems, Inc., not goods themselves and suggest Applicant to modify the claims through the use of additional generic terminology such as JAVA programming language method/virtual machine/virtual machine debug interface. However, as argued in the previous response, JAVA is used as an adjective, not a noun. Furthermore, the rejected claims do recite JAVA through the use of generic terminology as the Examiner suggested. For example, claim 13 recites "a JAVA method", claim 14 recites "a JAVA field" in "a JAVA virtual machine", etc.

Accordingly, Applicant respectfully requests the rejection to claims 13-15, 28-30, and 37-39 under 35 U.S.C. §112, second paragraph be withdrawn.

2. Lack of antecedent basis

The Examiner states that claims 35 lack antecedent basis. In response, Applicant has amended claims 35 to correct claim dependencies. In addition, claims 24, 25, and 36 have been similarly amended.

Accordingly, Applicant respectfully request the rejection under 35 U.S.C. §1.112 due to lack of antecedent basis be withdrawn.

Rejection Under 35 U.S.C. § 103

1. In the final Office Action, the Examiner rejected claims 1, 4-8, 13-16, 19-23, 28-31, 34, and 37-39 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,078744

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issued to Wolczko et al. ("Wolczko") in view of U.S. Pre Grant Publication 2001/0047510 issued to Angel et al. ("Angel"); and claims 2-3, 9-12, 17-18, 24-27, 32-34, 35-36 under 35 U.S.C. §103(a) as being unpatentable over Wolczko in view of Angel and further in view of "Poor Man's Watchpoints", by Max Copperman and Jeff Thomas (1995) ("Copperman"). Applicant respectfully traverses the rejection and contends that the Examiner has not met the burden of establishing a prima facie case of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *MPEP §2143, p. 2100-129 (8th Ed., Rev. 2, May 2004).* Applicants respectfully contend that there is no suggestion or motivation to combine their teachings, and thus no *prima facie* case of obviousness has been established.

Applicant reiterates the arguments set forth in the previously filed Response to the Office Action.

Wolczko discloses a technique to improve compile performance during subsequent compilations of a source program. An optimized compilation process recompiles portions of the source program and generates optimized machine code versions of the heavily used portions (Wolczko, col. 6, lines 51-55).

Angel discloses a byte code instrumentation. A technique to instrument a byte code program includes examining the byte code, selecting portions of the byte code for instrumentation, and instrumenting the portions to provide instrumented byte code (Angel, paragraph [0014]). Memory access instructions are instrumented to detect illegal memory operations at runtime (Angel, paragraph [0091]. In addition, exiting and entering blocks of code where variables become defined and undefined are monitored (Angel, paragraph [0091]).

Copperman discloses a technique to implement watch points using code patching. When the user sets a watch point, the debugger sets the register $fp to point to a register save area in the debuggee's static data space. When no watch points are set, the first instruction in the patch branches around the rest of the patch if $fp contains (Copperman, page 38, third paragraph under section "The Debuggee").

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Wolczko, Angel and Copperman, taken alone or in any combination, does not disclose, suggest, or render obvious (1) re-compiling when a field watch for a field is activated, (2) generating an instrumentation code corresponding to the field watch; and (3) inserting the instrumentation code to the native code. There is no motivation to combine Wolczko, Angel and Copperman because none of them addresses the problem of recompilation according to a field watch. There is no teaching or suggestion that a field byte code accessing or modifying the field is present. Wolczko, read as a whole, does not suggest the desirability of generating an instrumentation code corresponding to the field watch.

The Examiner states that Wolczko discloses recompiling byte code into native code (Final Office Action, page 3). However, Wolczko does not disclose recompiling a function when a field watch for a field is activated. Wolczko merely discloses recompiling a portion of a program that is heavily used (Wolczko, col. 6, lines 54-55). The condition for recompilation is the frequency of usage, not the activation of a field watch.

The Examiner further states that Angel discloses, activating field watch by monitoring memory access instructions and variables of a program (Final Office Action, page 4). Applicant respectfully disagrees. Monitoring memory access instructions and/or variables is not the same as activating a field watch of a field. A field watch sequence may include instruction sequence to spill the mimic stack operands, which are live at the field access point, to their canonical spill locations (See, for example, Specification, page 14, paragraph [0047]).

The Examiner further states that Copperman discloses guarding execution of the instrumentation code if the field watch is not activated by disclosing setting or not setting the watchpoints, or entering or enabling a watchpoint command (Final Office Action, page 9). Applicant respectfully disagrees. A watchpoint or watchpoint command is not the same as a field watch as discussed above.

In the Final Office Action, the Examiner responds to Applicant's arguments. Applicant contends that the Examiner's responses failed to overcome Applicant's arguments. The Examiner states that the Wolczko reference suggests recompiling altered code. Applicant respectfully disagrees. Wolczko merely discloses recompiling portions of a source program which is an interpreted code while the code is being executed (Wolczko, col. 6, lines 52-55).

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Since the code is being executed, it is impossible to alter the code. Wolczko discloses optimizing a compiler by not re-creating the related computationally expressive information.

The Examiner further states that "field watch" is a broad term. Applicant respectfully disagrees. Claim must be interpreted according to the Specification. See Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1248, 48 USPQ 2d at 1117 (Fed. Cir. 1998). A field is a JAVA variable that is defined in a JAVA object. Field access events are generated when the field specified is about to be accessed. Field accesses from JAVA Language Code or from JNI are watched. (See Specification, page 12, paragraph [0039].

The Examiner further states that the "field" could be the means of determination as whether a node in the Intermediate Representation (IR) tree is a "node of interest" (Final Office Action, page 12). Applicant respectfully disagrees. Angel merely discloses that a node of interest includes any node that is to be instrumented or which indicates that instrumentation is appropriate (Angel, paragraph [0089]). This is not related to a field watch.

The Examiner further states that Angel discloses recompilation in that the compiler may continue the compile process (Final Office Action, page 12). Applicant respectfully disagrees. Angel merely discloses that once the instrumented IR data element is provided, then the compiler may continue the compile process by accessing the instrumented IR data element to provide the object code (Angel, paragraph [0123]). Continuing the compile process is not the same as recompiling. Since Angel does not disclose or suggest recompiling, and neither Wolczko nor Angel discloses or suggests using a field watch, the combination of Wolczko and Angel is improper.

Therefore, Applicant believes that independent claims 1, 16, 31 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejections under 35 U.S.C. §112 and 35 U.S.C. §103(a) be withdrawn.

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Conclusion

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: September 29, 2004 By _____

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